

TABLE 5.12

1. Problem :	Percentage change in registration (all) in Employment Exchanges=F (% change in per capita income).			
2. Data :	All-States data, 1971 over 1961, 13 States.			
3. Results :	(a) $Y=a+bX$; $Y=318.8539 - .0196X$ $R^2=.3012$ $T=(6.15)$ (-2.83) $F=8.01$			
	(b) $Y=\log a+b \log X$; $Y=612.7743 - 236.9793 \log x$ $R^2=.3012$ $T=(3.0550)$ (-2.17) $F=4.74$			
	(c) $\log Y=\log a+b \log X$; $\log Y=3.5046 - 0.6079 \log X$ $R^2=.3697$ $T=(6.92)$ (-2.54) $F=6.45$			

TABLE 5.13

The enrolment ratio between general and professional education (Y) was regressed on fee rate ratio, (X_1) the ratio of the number of students per student subsidy in the two faculties (X_2) and the ratio of the amount of scholarship per student in the two faculties (X_3). The estimated equations are given below :

(i) $Y=3.3426 - 2.4253X_1 + 0.4943X_2 - 0.8563X_3$
(3.81) (2.77) (2.47) (1.21)
$R^2=0.7706$ $F=11.19$
(ii) $Y=0.8574 - 3.5846 \log X_1 + 1.6709 \log X_2 - 0.8150 \log X_3$
(2.33) (-3.33) (1.98) (0.97)
$R^2=0.8308$ $F=16.37$
(iii) $\log Y=-32.69 - 0.7574 \log X_1 + 0.2655 \log X_2 - 0.1488 \log X_3$
(3.58) (2.84) (1.27) (0.71)
$R^2=0.7477$ $F=98.79$

*Coefficients are significant at 0.99 level. Figures in brackets indicate T values.

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Relevance of Education to Development—Especially in Rural Areas

J.P. NAIK

(THE RELATIONSHIP of education to development has been greatly emphasized and examined in considerable depth in the last three decades because "development" itself has been the priority object of people all over the world, and especially in the so-called developing nations) Quite obviously, the analysis depends upon our concepts of "education" as well as of "development".

The developed nations

An extremely significant event in human history is the emergence of a few developed nations during the past 300 years. The growth of modern science and technology gave them a far deeper understanding of the resources and forces of Nature than man ever had and thereby endowed them with an unprecedented power to manipulate Nature and to produce an apparently unlimited quantity and variety of goods and services. This understanding of Nature and capacity to manipulate it would have had only beneficial results and improved the quality of life of all individuals if they had been subject to a moral order and used with an eye on the long-term interest of mankind. But unfortunately they were regarded as a law unto themselves and were used mainly for their immediate benefits in utter disregard of their

long-term consequences on the environment, man or society.) What is worse, this great power was captured by two forces—militarism and profit-oriented private capitalism—which exploited it to serve their narrow ends. ("Development" therefore came to be defined within this new context and meant military power based on increasingly deadlier weapons of destruction and the capacity to produce unlimited goods and services through uncontrolled industrialization.) The more a country had of these two powers which are obviously interrelated the more developed it was supposed to be.

This philosophy of development necessarily implied revolutionary changes in values, in organization of work, in social structures and functioning, in the nature of skills and attitudes required of individuals and generally in the life-styles of people. For instance, the pursuit of knowledge, especially of science and technology, assumed immense significance and received heavy investments in men, money and materials. The emphasis on the "hereafter", so characteristic of the pre-industrial world, gave place to an emphasis on the "here and now". The quality of life was confused with the standard of living or mere consumption of goods and services so that the earlier concepts of self-control or simplicity of life were abandoned and replaced by the theory of unlimited human wants (which could and should be fanned to the utmost by advertisement and propaganda) and consumerism. Nature came to be regarded as inexhaustible and its utmost exploitation became a sacred duty. Production ceased to be centred round articles of personal and family use and was directed towards commodities intended for the market. Work also went out of the home and became centred in large factories so that children became almost irrelevant or useless for production. Moreover, work also lost its intrinsic interest because it came to be restricted to simple, repetitive acts of drudgery and men had therefore, to be induced to work for other ulterior considerations. (The rapid stride of industrialization further led to an equally rapid growth of towns and cities with all the consequent changes in lifestyles. Industrialization also meant economic centralization which, in its turn, led to political and social centralization and reduced the autonomy of each individual. What is even worse, the desire to create and capture markets

for the growing products of the industrialized countries (or to secure the needed raw materials for them) led to conquests and colonization of the non-developed world and to the infliction of untold misery on their peoples.)

In retrospect, all these appear as immense disadvantages or almost catastrophic events. But they were hardly noticed at that time except by some philosophic thinkers whose voice remained unheard. (Blinded by the power, wealth and abundance of luxury goods produced by modern industry, people came to regard the industrial era as the golden age in the history of mankind, to equate industrialization with development, and to look upon the highly industrialized, rich and militarily powerful nations as the developed countries.)

In the shadow of this industrial development, the modern educational system was slowly but relentlessly shaped during the last 300 years. Above all, the industrial civilization needed four main things for its survival and success: (1) a continuous expansion of the knowledge base in science and technology; (2) a small but competent class of managers or entrepreneurs who could organize industrial production and provide the allied services; (3) a large manipulatable labour force which is prepared to do any kind of dull, repetitive or uninteresting work for an ulterior consideration like wages; and (4) a population addicted to consumerism which then becomes an inexhaustible market.

The educational systems of the industrialized countries tried to meet all those requirements to the full. The study of science and technology and the training of professionals, which had no place in higher education in the pre-industrial world, was now admitted in the new system of higher education, given a place of great honour and provided with large resources on a priority basis. In fact the overall investments in research in science and technology have been so large that, today, scientific knowledge doubles every 10 years or thereabouts. Adequate steps have thus been taken to ensure that modern society does not lack the knowledge base it needs and that it has the essential competent class of managers and entrepreneurs. The industrial society also introduced a system of universal education for children who no longer had any work to do, and provided vocational and technical education on a large scale as part of the

formal education system. It thus ensured availability of a large band of trained labour force having the requisite information and skills. Finally, the education system also tried to spread values and attitudes among the general population which were broadly supportive of the new mode of production. For instance, consumerism was inculcated as a value and every educated individual became a better buyer of the goods and services produced in the industrial civilization. The very process of education where children and young people were grouped together and put through common pre-planned steps in learning under the dominant authority of the teacher resembled a factory mode of production and cultivated the values expected of the labour force such as discipline, obedience and willingness to do uninteresting and even boring work for ulterior considerations like examination marks. With all such steps taken, it is hardly surprising that social scientists discovered that the formal system of education in the developed nations makes material contribution to "development" as identified by growth of the GNP. In fact, one finds a close and mutually supporting relationship established between education and productivity or development in these countries: the spread of education led to an increase of productivity or the GNP, and an increase in the GNP made larger revenues available for further investment in education.

Unfortunately, this concept of development as well as of education has run into serious troubles at the moment. The Third World has awakened and has become politically free and it is no longer easy to continue exploiting it. Industrialization itself has run into serious problems because of the alienation of workers and the increasingly acute problems of population. The pursuit of military might has brought the world to a point where the very survival of man is jeopardized. Consumerism has begun to yield diminishing returns; the people have begun to realize that the quality of life is not the same thing as the standard of living and that, even in the rich industrialized countries, the plenty *without* is hardly a compensation for the lack of peace *within*.

The attacks against the educational system have been equally severe and we have all kinds of proposals for radical reform, including the idea of de-schooling society. One does

not see exactly how this recent upsurge of radical ideas will be translated into practice and how we shall have "another" development and a related "new" system of education. But one thing is certain (the old concept that one can solve the problems created by industrialization and high technology by still further industrialization or still higher technology (or solve the problems of education by a further expansion of the educational system) is dead and buried. The need of an alternative, both in education and development, has been accepted and the search for it is on. We must discover and operationalize it if man is to survive and if life is to have some meaning.

The developing nations

Prior to the Second World War, most of the "developing" nations of today were either colonies or empires of the developed countries. They had been introduced to the modern industrial civilization mainly to help the development of the ruling powers than their own. After the Second World War, they became politically independent and launched programmes of "development" which merely meant that they accepted consumerism as a basic value, equated quality of life with mere standards of living, and wanted to imitate the developed countries and be rich, industrialized and militarily powerful. In this endeavour they received assistance and support from the UN agencies and also from the developed countries on a bilateral basis.

These developing countries saw that industrialization was not merely a matter of setting up factories and buying technologies but that it also had far-reaching implications regarding changes in values and skills of the people which could be brought about through education. They assumed that they had only to create an educational system similar to that of the developed countries to become like them: industrialized, rich and militarily powerful. Hence, they launched two programmes simultaneously: to industrialize themselves with borrowed technology, capital and even personnel; and to plan their formal educational systems on the models of the developed nations.

Looking back at the scene after about three decades of

endeavour on these lines, one is pained (though not exactly surprised) to discover that both these programmes have failed. The developing countries have not been able to be militarily powerful, in spite of all their expenditure on armaments, because they depend on borrowed technology and purchase of arms from the developed nations. They do not have adequate indigenous capability to be self-sufficient in defence. Most of them cannot even build it up, and none of them can compete with the developed countries who have far vaster resources and have had such a great head-start. Of course, the absurd point is that even if they become militarily powerful, they will have nothing to defend except their own backwardness.

The same difficulties arise in industrialization as well. The multi-nationals succeed in blocking the genuine development of the Third World although they pretend to promote it. The developing countries have mostly to depend on borrowed technology which is unsuitable to their basic endowments. They have no overseas colonies to which they can export their poverty or proletariat; and being new comers in the field, they have several inherent handicaps which more than outweigh the advantages of the situation. The progress of their industrialization has, therefore, been slow, painful and halting.

In education also, the picture is no better. These countries are trying to adopt an alien educational system which has no roots in their soil. The attempt does not succeed because their resources are very inadequate and the socio-economic conditions are very different. They are unable to liquidate illiteracy or even to make elementary education universal. On the other hand, they have overexpanded their systems of secondary and higher education to such an extent that educated unemployment has become a serious social problem. All that has happened as a result of this effort at imitative industrialization and educational reconstruction (or 'modernization' as it is often called) is to create a small western-educated elite which identifies itself with the elite in the developed countries, is alienated from its own countrymen and maintains comparatively high standards of living by exploiting the common people who are poor, illiterate and unhealthy. Consequently, the severe inequalities between nations are reproduced within the developing nations; and the situation becomes increasingly explosive.

because the gap between the capacity of these countries to produce goods and services and the demands of the people increasingly addicted to consumerism (which they have borrowed from the developed countries) continues to widen. All things considered, the fate of these developing countries seems to be as pitiable as that of frog in Aesop's fable who wanted to inflate himself to the size of the bull he saw. The attempt is not likely to succeed; and even if it does, it is hardly worth while.

Rural development

How do these problems of education and development affect the rural areas? The situation varies in the developed and developing nations.

Industrialization is essentially an urbanizing force; and as countries have become highly industrialized, for example the USA, they have also become highly urbanized in the sense that a vast bulk of their population has come to live in cities and towns. The population in rural areas has been reduced to very small proportions; and even in the small communities that their villages are all modern amenities like roads, medical care, schools, shops etc. are provided so that the difference between urban and rural areas is reduced to the minimum. The rural problem in such cases has very little significance. In fact, in these countries, the rural areas hardly present any difficult problem. If there is a problem at all, it is in the squalor and crime of urban areas.

In the developing countries, however, the situation is entirely different. Here the former colonial or imperial as well as the powers successor to indigenous governments had a simple policy to follow: modernization or industrialization of these countries in two phases:

- (1) modernize and industrialize a few urban centres which would then look like small patches of the developed nations planted as "islands" in a sea of undeveloped rural areas; and then
- (2) urbanize the rural areas.

In implementing the first stage of this policy, vast resources of all kinds were sunk in a few urban centres which proposed and began to look like the developed nations because of their industry, modern buildings, transport facilities, water-supply and drainage services, modern educational and medical facilities, etc. All this of course implied that the urban areas prospered at the cost of rural areas or by exploiting them so that they became not healthy growths but tumours of ill-health in the social body. But when it came to the second stage of urbanizing or developing the rural areas, the resources ran out, and even to this day most rural areas are primitive, without modern amenities like roads, safe water-supply and drainage, electricity, or medical and educational services. A tremendous disparity has thus grown between urban and rural areas, similar to that between the developed and developing nations. The urban areas also continue to exploit the rural areas as the developed countries exploit the developing countries.

A tale of similar disparities and exploitation is seen in the educational field as well. By and large, education in rural areas began much later than in urban areas. Because of their large population size, urban areas generally have facilities for education at all stages including the university. But in rural areas, sometimes there is no educational facility at all; and in most of them, there is only an elementary school. Some villages have secondary schools and a few may even have colleges. But taken all-in-all the provision of school facilities in rural areas still continues to be gravely inadequate in comparison to urban areas. The quality of rural education is also poor because of low standards of buildings and equipment and especially because good teachers prefer to work in urban areas. As there is no essential difference between urban and rural education, the programme of rural education may be described as that of urban education conducted with greater inefficiency.

What next?

Where do we go from here? The creation of the New International Economic Order (NIEO) implies the lessening of inequalities between and within nations. This obviously implies that the domination of the world situation by a few developed

countries must go and also that the domination of elites within the national societies should also go (or the domination of urban over rural areas should also go). The methods to be adopted to achieve these objectives will obviously depend upon our understanding of the main factors which are responsible for the present unhappy situation of inequality.

The preceding discussion has shown that the existing inequalities *between* nations arise essentially from the concepts of "development" and "education" that grew up in the western world over the last 300 years; and consequently it is not possible to reduce these inequalities unless these concepts are abandoned and replaced by those of "another" development (based on a different view of our relationship to nature and the use of technology) and another type of education. It was also seen that the old concepts lead to the creation of an exploiting elite *within* the developing nations (which lives on the surplus it draws from the toiling masses) and create inequalities between different social groups within these nations. It is again the same concepts that create inequalities and exploitative relationships between urban and rural areas. The basic cause of all these different symptoms of illness or of inequalities is the same; and it is this which we must attack. In other words, we must think of another development based on living in harmony with Nature rather than on its exploitation, place a premium on quality of life rather than on mere consumerism, and develop alternative technologies which will reduce pollution, generate greater employment and cause less alienation. This is a basic and radical change. If it is carried out, the New International Economic Order will be nearer, inequalities between and within nations (as well as those between urban and rural areas) will decrease and corresponding educational changes will follow.

The bringing about of the NIEO is essentially a political task. Education can play an important but only a secondary role in this endeavour. The relationship between education and society is dialectic: social change is necessarily reflected in education and educational changes can prepare the ground for, consolidate and complete social changes. The educational system cannot remain a silent spectator of the social and economic transformation that is taking place and will take

place in the world: it has a positive role to play in the creation of the international economic order which visualizes greater equality between and within nations. In this regard four points can be made:

- (1) The education system can promote a world-wide debate on the new social order that is needed, the causes of the present inequalitarian order, the manner in which this can be altered and the large-scale research programme that is necessary to clarify ideas on this subject. This is a contribution which the education system, particularly the teachers, can make.
- (2) It is necessary to involve students also in this debate; after all, they are more affected by the world of tomorrow. We should therefore, involve them in a discussion in depth of the new world order that we want and how we can create it.
- (3) The education system should play a role in creating a strong public opinion in favour of the new economic order in all parts of the world.
- (4) The education system should promote egalitarian and avoid inequalitarian tendencies. For instance, universal elementary education is an egalitarian programme and this could be supported. The expansion of higher education is definitely inequalitarian and should be controlled. Separation of manual work from intellectual work is inequalitarian, whereas, the combination of manual and intellectual work is egalitarian. In other words, educationists should be able to identify educational programmes which are egalitarian or inequalitarian and support the former and contain the latter. These are some of the ways in which the educational system can promote the creation of a New International Economic Order.)

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Educational Disparities, World Politics and the New International Economic Order*

JOHANN GALTUNG

An empirical point of departure

SOME years ago a study was carried out for the UNESCO on the relationship between educational growth and educational disparity.¹ The definition of "education" was very conventional; it was actually not education but schooling, and the level of schooling was defined in terms of the scale used by the Office of Statistics of UNESCO: no schooling, primary incomplete, primary complete, entered first cycle of secondary, entered second cycle of secondary, post-secondary. The definition of "educational growth" (of a country) was the median level attained (by the population 25+, or by the cohort 25–34 years of age) on this "scale" from 1 to 6. And the definition of "educational disparity" was the distance in level of schooling, on this scale, between the top and bottom 25 per cent, the top 5 per cent and the bottom 50 per cent and the top 5 per cent and the bottom 10 per cent. Data from 86 countries with more than 100,000 inhabitants were used for the study. What were the findings? Simply this:

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